

“Blue balls” and sexual coercion: a survey study of genitopelvic pain after sexual arousal without orgasm and its implications for sexual advances

Samantha Levang, MSc¹, Megan Henkelman, BAH¹, Robin Neish, BScH¹, Wendy Zukerman, BMSc/LLB², Blythe Terrell, MSc², Victoria Jackman, BComH³, Shannon Coyle, MA¹, Jamin Brahmhatt, MD⁴, Caroline Pukall, PhD, CPsych^{1,*}

¹Department of Psychology, Queen’s University, Kingston, ON K7L3L3, Canada

²Gimlet Media, Brooklyn, NY 11217, United States

³Memorial University of Newfoundland, St John’s, A1B1T0, Canada

⁴Orlando Health, Orlando, FL 34711, United States

*Corresponding author information: Dr. Caroline Pukall, Department of Psychology, Queen’s University, 62 Arch St, Kingston, ON K7L3L3, Canada.

Email: pukallc@queensu.ca

Abstract

Background: Blue balls/vulva has received increasing interest from the public in recent years, sparking debate about genital physiology, controversy around “sexual release” as a treatment for this type of pain, and sexual consent.

Aim: This cross-sectional, mixed-methods online study aimed to evaluate the general understanding and frequency of blue balls/vulva and whether individuals have ever been pressured to continue sexual activity because of a partner’s fears of experiencing pain without orgasm.

Methods: A total of 2621 individuals with a penis (n = 1483) or vagina (n = 1138) were recruited for an online survey on the experience of “blue balls/vulva.” Quantitative analyses consisted primarily of descriptive statistics and chi-square analyses. Between-group differences were analyzed (based on whether respondents reported having a penis or vagina), and responses to open-ended questions were examined via thematic analysis.

Outcomes: The primary outcomes of interest were reports of the belief in blue balls/vulva, the frequency and pain characteristics of blue balls/vulva, and the incidence of being pressured to continue sexual activity due to a partner’s fears of experiencing pain without orgasm.

Results: Results indicated that significantly more individuals with a penis than a vagina reported believing that blue balls are real, endorsed experiencing pain when they approached orgasm but did not ejaculate, and reported moderate and severe pain. Significantly more individuals with a vagina than a penis reported being pressured into a sexual act due to a partner’s fear of experiencing pain without orgasm. Results from the thematic analysis indicated that participants recognized that those with a vagina are expected to act sexually to prevent their partners’ experience of blue balls, despite agreement that this phenomenon should not be used to coerce or manipulate partners into engaging sexually.

Clinical Implications: Education on the frequency of this phenomenon and methods to relieve pain alternative to partnered sexual activity should be addressed in patients who present with this condition.

Strengths and Limitations: Although the survey was brief, it provided information from a relatively large sample about whether people believe that this phenomenon exists, how many experience it, how painful it is, and how often it has been used as an excuse for a partner to continue sexual activity.

Conclusion: Results indicated that severe pain exists in a minority of individuals, that solitary sexual and nonsexual activities can help to alleviate the discomfort, and that this pain is not a valid reason to continue unwanted sexual activity.

Keywords: sexual coercion; sexual arousal; genitopelvic pain; blue balls; blue vulva.

Introduction

Epididymal hypertension, colloquially referred to as “blue balls,” is a term used to describe scrotal pain following heightened sexual arousal that did not result in orgasm.¹ It is not associated with health- or life-threatening outcomes and appears to resolve on its own (usually over a few minutes to hours) or with orgasm. One theory on the etiology of epididymal hypertension proposes that the slowed drainage of blood from the testicles following sexual arousal without orgasm could at least partly explain the pain.² During an erection, blood engorges the genital structures, which in turn increases their size and local blood pressure.^{3,4} To maintain an erection, venous outflow is restricted through the compression of the

emissary veins between the sinusoids and tunica albuginea. Following orgasm, the veins quickly decompress, resulting in the emptying of blood from the genitals.^{3,5} According to this theory, the slowed drainage of blood in the absence of ejaculation may result in prolonged congestion and lead to discomfort and pain.² Proponents of this theory ascribe the term “blue balls” to the phenomenon of deoxygenated blood appearing blue under the scrotal skin.⁶

The first mention of the term “blue balls” was reportedly in America circa 1916,⁷ and it persists as a widely used term in American popular culture today.⁶ Even though many health-related and popular online sources (eg, *Healthline*,² *Medical News Today*,⁸ *Cosmopolitan*⁹) feature information

Received: February 7, 2023. Revised: March 26, 2023. Accepted: March 30, 2023

© The Author(s) 2023. Published by Oxford University Press on behalf of The International Society of Sexual Medicine.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

For commercial re-use, please contact journals.permissions@oup.com

on its potential causes and treatments, only 1 interview-based study¹⁰ and 1 case report¹ exist on this phenomenon in the scientific literature. In 2000, Chalett and Nerenberg¹ published a report on a 14-year-old boy who presented with sharp scrotal pain following sexual activity without orgasm. The patient reported no other symptoms, and the pain subsided without intervention after a few hours.¹ The authors also conducted an informal survey in which they assessed whether the term “blue balls” was known to health care providers (eg, urologists, pediatricians) and others. They found that knowledge of the term was widespread; however, no one was aware of any medical references to it.

The paucity of scientific literature surrounding blue balls has created confusion and conjecture; despite common societal acceptance, some question whether it is real,⁹ and some believe that it is used as an excuse to coerce their partners to continue sexual activity.¹¹ For example, substantial attention to the issue of people using blue balls as an excuse to pressure their partners to continue sexual activity was featured in response to a TikTok video reportedly posted by a man (it has since been deleted) claiming that blue balls are not painful and that men use it as a ruse to convince women to engage sexually with them. The video resulted in an uproar, with rageful comments posted by women who recounted experiences of continuing sexual activity out of guilt to prevent their partners from having pain.¹² The frequency of sexual coercion due to blue balls is currently unknown; however, researchers examining the role of arousal in sexual decision making have found that self-reported sexual arousal increases an individual’s probability of using sexual coercion (eg, coaxing, lying) with a partner.^{13,14}

Discomfort or pain after high levels of sexual arousal without orgasm has recently been reported in the popular press by people with vulvas as well; their reports, ranging from throbbing discomfort to scorching pain, have been featured in articles on “blue clit,” “blue vulva,” “blue bean,” and “pink pelvis.”¹⁵⁻¹⁷ Due to these reports, the term “blue balls/vulva” is used in this article to describe pain experienced due to sexual arousal without orgasm.

The aim of this brief mixed-methods, cross-sectional online study was to better understand people’s experiences with and perceptions of blue balls/vulva. Our primary research questions were as follows: (1) Do people believe that this phenomenon exists? (2) Have people experienced it, and, if so, how severe and frequent was it? (3) Have they ever been pressured to continue sexual activity because of a partner’s fear of experiencing blue balls/vulva? Between-group differences (based on whether respondents reported having a penis or vagina) were also conducted on these questions, and responses to open-ended questions were examined via thematic analysis.

Methods

Participants

A total of 2621 individuals with a penis or vagina were recruited in September 2021 for an online survey on the experience of “blue balls/vulva.” The survey was promoted via the social media outlets (eg, Twitter, Instagram, Facebook) of Gimlet Media’s *Science Vs* podcast.

Procedures

Advertisements contained a link to an online survey hosted by Typeform. The survey was developed by the *Science Vs*

podcast team (W.Z., B.T.), and all recruitment was conducted through their social media outlets. After the survey closed, the data were downloaded, analyzed, and featured in a podcast on blue balls.¹⁸ The *Science Vs* team approached C.P. to discuss publishing the data, and ethics approval was obtained for the sharing of data between the *Science Vs* team and Queen’s University and for further analysis of the data set (PSYC-259-22, “Blue Balls’: Do They Exist?”; file 6035551).

Measures

The survey consisted of 13 questions (see [Tables 1](#) and [2](#) for response options) that were branched by the first question regarding whether the respondent had a penis or vagina. Those who selected “penis” were asked 6 questions, starting with “When you’ve approached orgasm, but didn’t ejaculate, have your testicles or the area around them ever hurt or felt achy?” If the response was yes, participants provided information about how painful this feeling was and how often this pain was experienced. The final 2 multiple-choice questions focused on whether the respondents believed that blue balls were real and whether they had ever been pressured sexually because of a partner’s fears of getting blue balls. An open-ended question followed: “Anything else you want to add?” Those with a vagina were asked 6 similar questions. The pain questions asked whether they experienced hurt or achiness in their vulva/clitoris when they approached orgasm, how painful it was, and how often the pain occurred. They were asked whether they believed that blue balls were real for people with testicles, whether they had ever been pressured sexually by a partner due to blue balls, and if they had anything else to add (open-ended). Note that the open-ended question was added to the survey after it had been live for a day.

Data considerations

Quantitative analyses were conducted with SPSS version 25 (IBM) and consisted primarily of descriptive statistics and chi-square analyses. Significance was set at 0.05. Due to the survey allowing respondents to skip questions and to offer >1 response to each question, some percentages do not add to 100%. A thematic analysis was conducted on the open-ended questions.¹⁹ A thematic analysis was used on responses to open-ended questions to allow the authors to fully explore the range of responses and perspectives provided by the participants. Four coders (M.H., S.L., R.N., V.J.) independently coded responses and generated thematic maps separately for the responses of participants with a penis or a vagina. The coders then met to combine their findings, resolve discrepancies, and discuss the unique and similar themes emerging between groups. The thematic maps (for those with a penis or vagina) were then finalized and combined with agreement among all coders.

Results

Demographic characteristics

The sample size consisted of 2621 individuals: 1483 (56.6%) with a penis and 1138 (43.4%) with a vagina.

Descriptive results

Descriptive results regarding belief in blue balls, pain characteristics (eg, intensity, frequency), and whether respondents have been pressured to engage sexually due to a partner’s fear

Table 1. Results for those with a penis (n = 1483).

	Respondents with a penis, No. (%)	
	Question	Item
Belief in blue balls	1480 (99.8)	
Yes		614 (41.5)
No		408 (27.6)
Unsure/do not know		417 (28.2)
Never heard of blue balls		41 (2.8)
Pain experienced in testicles when approaching orgasm without ejaculation	1480 (99.8)	
Yes		829 (56.0)
No		559 (37.8)
Always ejaculate		92 (6.2)
Degree of pain experienced	851 (57.4)	
Mild pain		492 (57.8)
Moderate pain		302 (35.5)
Severe pain		57 (6.7)
Frequency of pain experienced	901 (60.8)	
Very rarely		410 (45.5)
Rarely		315 (35.0)
Often		157 (17.4)
Every time I did not ejaculate		19 (2.1)
Pressure to engage sexually due to a partner's fear of getting blue balls/vulva	1309 (88.3)	
Yes		49 (3.7)
No		1260 (96.3)

Table 2. Results for those with a vagina (n = 1138).

	Respondents with a vagina, No. (%)	
	Question	Item
Belief in blue balls in people with testicles	1134 (99.6)	
Yes		349 (30.8)
No		296 (26.1)
Unsure/do not know		470 (41.4)
Never heard of blue balls		19 (1.7)
Pain experienced in vulva/clitoris when approaching orgasm without orgasm	1134 (99.6)	
Yes		477 (42.1)
No		615 (54.2)
Always orgasm		42 (3.7)
Degree of pain experienced	491 (43.1)	
Mild pain		412 (83.9)
Moderate pain		72 (14.7)
Severe pain		7 (1.4)
Frequency of pain experienced	456 (40.1)	
Very rarely		121 (26.5)
Rarely		229 (50.2)
Often		91 (20.0)
Every time I did not orgasm		15 (3.3)
Pressure to engage sexually due to a partner's fear of getting blue balls/vulva	1065 (94.0)	
Yes		427 (40.1)
No		638 (59.9)

of blue balls are presented in Tables 1 and 2 (respondents with a penis and a vagina, respectively).

Between-group results

Belief in blue balls

To investigate whether people with a penis differed from those with a vagina in terms of whether they believed blue balls to be real, a chi-square test of independence was performed. Results indicated a statistically significant difference, $\chi^2(4, N = 2621) = 57.71, P < .001$. Significantly more individuals with a penis reported believing that blue balls were real,

and significantly more individuals with a vagina reported that they were unsure or did not know if blue balls were real.

Pain

To investigate whether people with a penis differed from those with a vagina in terms of whether they experienced painful genitals during sexual arousal without orgasm, a chi-square test of independence was performed. Results from the chi-square analysis indicated a statistically significant difference, $\chi^2(3, N = 2621) = 69.52, P < .001$. Significantly more individuals with a penis endorsed experiencing pain. However,

significantly more individuals with a penis reported always ejaculating/orgasming during sexual activity, thus never having experienced blue balls. There was also a statistically significant between-group difference for the degree of pain experienced, $\chi^2(3, N = 2621) = 144.86, P < .001$: significantly more respondents with a penis reported experiencing moderate and severe pain. Finally, a statistically significant between-group difference was found in the frequency of pain experienced, $\chi^2(4, N = 2621) = 120.21, P < .001$: those with a penis were more likely to report often or rarely experiencing pain.

Pressure to engage sexually

Results from a chi-square test of independence indicated a statistically significant difference between those with a penis and a vagina, $\chi^2(2, N = 2621) = 508.72, P < .001$. Significantly more individuals with a vagina reported being pressured to perform a sexual act due to a partner's fear of experiencing blue balls.

Thematic analysis results

Several main themes, subthemes, and subtheme elements emerged (Table 3). See [Supplementary Materials](#) for details regarding subthemes, subtheme elements, and representative responses.

Main theme: fact or fiction

Responses relating to the factual/fictional nature of blue balls/vulva fell into the following subthemes: *Fact (real)*, *Fact (real but . . .)*, *Fiction*, and *Mixed/uncertain*, as well as *Partner's perspective (real, fake, and mixed)*. Participants who stated that blue balls/vulva were a fact either explicitly endorsed the phenomenon as being real or said that while they believed that it was real, they felt that people (especially men) overexaggerated their symptoms, sometimes to pressure a partner into engaging in sexual activity. Those who asserted that blue balls/vulva were fiction either commented on their lack of experience of the phenomenon or described it as a myth that individuals use to pressure others (primarily women) into engaging in sexual activity, often to the point of their climax/orgasm. Responses endorsing mixed or uncertain viewpoints on the existence of blue balls/vulva fell into 2 categories: being unsure of whether their physical sensations constituted blue balls/vulva or acknowledging that while they did not know whether the physical symptoms were real, the concept of blue balls/vulva is real and has societal implications (ie, rape culture). Some remarked on their negative experiences with partners who believed in blue balls: those whose partners felt that blue balls/vulva were real mentioned that their partners either avoided sexual activity with them or pressured them into sexual activity because they thought that blue balls/vulva would occur. Respondents with a vagina reported hearing mixed options on the factual and fictional nature of blue balls from partners with penises.

Main theme: personal definition does not align with study definition of blue balls/vulva

Some participants disclosed that their definitions and experiences of blue balls/vulva did not align with the study's definition. These responses fell into the following subthemes: *Mental/emotional phenomenon*, *Alternative physiologic phenomenon*, and *Social phenomenon*.

Main theme: physical experience

Multiple subthemes represented one's physical experience of blue balls/vulva: *Site of sensation*, *Characterization of sensation*, *Cause of sensation*, *Relieving factors*, *Age of experience*, *Time course*, *Severity*, and *Frequency*. Responses relating to the site of sensation were represented by the following subtheme elements: *Abdomen/stomach ache/cramping*, *Testicles*, *Groin*, *Vagina*, and *Clitoris*.

The subtheme *Characterization of sensation* was represented by the following subtheme elements: *Pain*, *Ache/throbbing*, *Pressure/release/tension*, *Sensitive*, *Uncomfortable*, *Frustrating/unsatisfied*, *Lingering arousal/libido*, *Nausea*, *Headache*, *Itch*, and *Restlessness*. Most of these sensations were endorsed by those with a penis and a vagina, but restlessness and itch seemed unique to those with a penis or vagina, respectively.

The subtheme *Cause of sensation* was represented by the following subtheme elements: *Prolonged foreplay/making out*, *Prolonged arousal with lack of orgasm*, *Waiting for orgasm*, *Post-orgasm*, *Blood pooling in genitals*, *Lack of ejaculation*, *Lack of penetration*, *Lack of vulvar/vaginal stimulation*, *In the context of partnered (not solitary) sexual activity*, and *Physical force/friction*. Prolonged foreplay or making out without penetrative intercourse was a reported cause of blue balls for those with a penis but not for those with a vagina. However, those with a vagina noted that partners tried to pressure them into intercourse after kissing. Causes uniquely endorsed by participants with a penis included a lack of ejaculation and engagement in partnered sexual activity (but not during solitary sexual activity), whereas those uniquely described by participants with a vagina were lack of penetration and lack of vulvar/vaginal stimulation. The subtheme *Relieving factors* was represented by the following subtheme elements: *Orgasm/release*, *Masturbation*, *Ejaculation*, *Wait it out*, *Cold*, *Heat*, *Medication*, and *Exercise*. Ejaculation, cold, and exercise were uniquely endorsed by respondents with a penis as relieving solutions.

Participants with a penis felt that age was an important factor in the onset and experience of blue balls. The subtheme *Age of experience* was represented by several subtheme elements: *Younger age (puberty to ~25 years)*, *Only happened in youth*, *Happens less with increasing age*, and *Happens when older*. Most respondents who addressed age of onset mentioned that it began at an early age, between puberty and young adulthood, and that it was worse and more frequent when they were younger. Participants with a vagina did not remark on age of onset, but some disclosed that their first experience of being coerced into sexual activity due to a partner's fear of blue balls happened when they were younger.

The subtheme *Time course* of blue balls/vulva was described by several participants. These descriptions were represented by the following subtheme elements: *Minutes*, *Hours*, and *Days*. While many felt that the experience lasted from just a few minutes to under an hour, others stated that their experiences lasted several hours, with some with a penis reporting experiencing blue balls over the course of days.

For those who experienced blue balls/vulva, their accounts of symptom severity ranged. The subtheme *Severity* was represented by the following subtheme elements: *Severe*, *Moderate*, *Mild*, *Nonpainful sensation*, *Nonpainful emotional experience*, and *Appraisal of danger*. Participants who reported severe symptoms experienced hospitalization, trouble walking, sharp pains, and headaches. Respondents who reported

Table 3. Thematic analysis: main themes, subthemes, and subtheme elements.

Main themes: subthemes	Subtheme elements
Fact or fiction	
Fact (real)	
Fact (real but . . .)	
Fiction	
Mixed/uncertain	
Partner perspectives (real)	
Partner perspectives (fake)	
Partner perspectives (mixed)	
Personal definition does not align with study definition	
Mental/emotional phenomenon (theory and descriptor)	
Alternative physiological phenomenon	
Social phenomenon	
Physical experience	
Site of sensation	Abdomen/stomach ache/cramping Testicles Groin Vagina Clitoris Pain Ache/throbbing Pressure/release/tension Sensitive Uncomfortable Frustrating/unsatisfied Lingering arousal/libido Nausea Headache Itch Restless
Characterization of sensation	Prolonged foreplay/making out Prolonged arousal with lack of orgasm Waiting for orgasm Post-orgasm Blood pooling in genitals Lack of ejaculation Lack of penetration Lack of vulva/vaginal stimulation (vulva/vagina) In the context of partnered (not solitary) sexual activity Physical force/friction
Cause of sensation	Orgasm/release Masturbation Ejaculation Wait it out Cold Heat Medication Exercise
Relieving factors	Younger age (puberty to ~25 years) Only happened in youth Happens less with increasing age Happens when older Age of coercion
Age of experience	Minutes Hours Days
Time course	Severe Moderate Mild Nonpainful sensation Nonpainful emotional experience
Severity	Appraisal of danger Never experienced Only once A few times Often when in provoking situations
Frequency	
Cultural expectations	
Used to coerce/manipulate	
Should never be used to coerce/manipulate	

(Continued)

Table 3. Continued

Main themes: subthemes	Subtheme elements
Has been coerced/manipulated by partner(s) Partner had it, but did not coerce/manipulate Has used it to coerce/manipulate partner(s) Engaged in sexual activity to avoid it Perceptions of masculinity	
Caveats and contextual items Gender identity Sexual orientation Religious beliefs Other related health information	

moderate symptoms stated that they experienced swollen testicles and pain, and those with mild symptoms described more of an ache or slight discomfort. Others who stated that their experiences were not painful described other uncomfortable physical sensations, from prolonged libido to negative emotions such as feeling bummed out or dissatisfied. Some additionally made an *Appraisal of the danger* associated with blue balls/vulva, stating that while painful, it is not medically dangerous.

Participants experienced blue balls/vulva at varying frequencies. The subtheme *Frequency* was represented by the following subtheme elements: *Never experienced*, *Only once*, *A few times*, and *Often when in provoking situations*. It was less common for respondents to state that they experience blue balls/vulva often. Participants with a vagina made fewer comments addressing the frequency of blue vulva, with no respondents stating that they experienced blue vulva only once or often.

Main theme: cultural expectations

Commentary on the cultural expectations associated with blue balls/vulva fell into the following subthemes: *Used to coerce/manipulate*, *Should never be used to coerce/manipulate*, *Has been coerced/manipulated by partner(s)*, *Partner had it but did not coerce/manipulate*, *Has used it to coerce/manipulate partner(s)*, *Engaged in sexual activity to avoid it*, and *Perceptions of masculinity*. Some respondents described their belief that the concept of blue balls/vulva is used to coerce people into sexual activity, with others also stating that it should never be used for this purpose. Several stated that while their partner(s) experienced blue balls/vulva, they did not feel pressured into sexual activity. Many people with a vagina and a few with a penis disclosed having been coerced by a partner or partners.

Main theme: caveats and contextual items

Contextual information derived from responses fell into the following subthemes: *Gender identity*, *Sexual orientation*, *Religious beliefs*, and *Other related health information*. Responses regarding experiences of being transgender, lesbian, asexual, or religious or having other health conditions may have affected the disclosed experiences.

Overall, participants with a penis and those with a vagina responded similarly, with a few exceptions. In addition to the previously mentioned differences, many participants with a vagina commented on their partners' experiences of blue balls, in contrast to those with a penis, who rarely commented on their partners' experiences of blue vulva. In addition, respondents overall recognized that those with a vagina are expected to act sexually to prevent their partners' experience

of blue balls, even though there was agreement that this phenomenon should not be used as an excuse to coerce or manipulate partners into engaging sexually.

Discussion

The present study sought to examine whether people believe in the phenomenon of blue balls/vulva, whether people experienced this pain and how intense and frequent their pain experiences were, and whether they had ever been pressured to continue sexual activity in response to a partner's potential experience of genital pain without orgasm. Results indicated that more individuals with a penis than a vagina believed that the phenomenon of blue balls is real. Results also indicated that 56% with a penis and 42% with a vagina reported experiencing blue balls/vulva and that significantly more participants with a vagina than a penis reported experiencing pressure to continue sexual activity in response to the possibility of their partners' genital pain without orgasm. These findings were echoed by responses to open-ended questions: participants described how those with a vagina were more likely to be pressured to engage sexually in this situation ("Men have used this to pressure me many times" [participant with a vagina]). In addition, some believed that the symptoms were exaggerated for the purpose of sexually coercing partners ("It's an excuse men use to get sexual relief" [participant with a penis]).

Generally, the pain experiences of most participants were mild (described as a mild ache or pressure) and infrequent. Of note, a small proportion reported severe and frequent experiences of blue balls/vulva. Regardless of intensity and frequency, however, the experience of blue balls/vulva should not be used as an excuse to sexually coerce a partner, as mentioned by many respondents. Indeed, the most concerning finding of the present study is that those with a vagina were significantly more likely than those with a penis to report that they had experienced sexual pressure from a partner in response to this pain. This finding is consistent with previous literature stating that the experience of blue balls can be used as an instrument of persuasion to coerce women into engaging in sex on compassionate grounds.⁶ Incidences of being coerced into sexual activity out of feelings of guilt are also present in men who have sex with men.²⁰

Though blue balls/vulva may be used as a coercive tactic to pressure a sexual partner to engage in sexual activity, theories of communal motivation propose that noncontingent responsiveness to a partner's sexual needs—termed "high sexual communal strength"—can have benefits for romantic relationships, such as greater sexual well-being for both

partners.^{21,22} However, dyadic research has indicated that motivation to meet a partner's sexual needs without consideration of one's own needs is associated with poorer well-being and higher levels of distress.^{22,23} Coerced sexual activity can negatively influence health and well-being; heightened risk of depression, anxiety, low self-esteem, and negative sexual self-perceptions are associated with experiences of sexual coercion.^{24,25} It is important to note that options outside of partnered sexual activity exist as a remedy for blue balls/vulva and include solitary masturbation to orgasm, the passage of time, nonsexual activities that involve distraction, exercise, breathing techniques to slow one's heart rate, urinating, and cold showers or baths.^{1,26} Indeed, in a study conducted by Nash and Sumner,¹⁰ participants reported that going to sleep, studying, engaging in other activities, and allowing time to pass helped resolve their pain. Interestingly, orgasm did not resolve the pain in some.¹⁰

Limitations

Although the current study provided unique information from a relatively large sample about blue balls/vulva, the findings should be interpreted in the context of several limitations. In some cases during the thematic analyses, it was difficult to discern whether responses detailing experiences of pain were related to or better explained by another genitopelvic pain condition or were due to intense sexual activity. Additionally, sexual coercion was never explicitly defined to participants; they were asked if they had ever been "pressured to do something sexual due to a partner's fear of getting 'blue balls.'" The current study did not assess the motivations of the individuals who responded to their sexual partners' blue balls/vulva by providing relief via ejaculation/orgasm; future research examining motivations is needed. We recognize that viewing responses from this question as potential sexual coercion, especially with no data identifying either partner's motivations to engage sexually, is our interpretation. Furthermore, the survey ads were visible to those who engaged with the *Science Vs* podcast, and the survey was limited in terms of the breadth of questions (eg, it did not ask basic sociodemographic information such as age). Thus, we were unable to discern which participants were engaging in different- or same-sex sexual activity to examine potential differences. Moreover, we recognize that not every one with a penis also has testicles and that the terms "vulva," "clitoris," and "vagina" were used interchangeably in the survey questions.

Conclusion

The phenomenon of blue balls/vulva has received an increasing amount of interest from the public in recent years, sparking debate about genital physiology, controversy around "sexual release" as a treatment for this type of pain, and discussions around sexual consent. Despite the perception within the media that blue balls/vulva is a common experience, the results of this study suggest that severe pain exists in a minority of individuals, that solitary sexual and nonsexual activities can help to alleviate the discomfort, and that this pain is not a valid reason to continue unwanted sexual activity.

Acknowledgments

We thank Hannah Harris Green, Michelle Dang, Rose Rimler, Nick DelRose, Morgan Green, and Rebecca Kling for their work on the study

and the *Science Vs* podcast, "Blue Balls: You're Wrong About Them" episode.

Supplementary material

Supplementary material is available at *Sexual Medicine* online.

Funding

This work was supported by the Canadian Institutes of Health Research (grant 178118) and Spotify.

Conflicts of interest: None declared.

References

- Chalett JM, Nerenberg LT. "Blue balls": a diagnostic consideration in testiculoscrotal pain in young adults: a case report and discussion. *Pediatrics*. 2000;106(4):843.
- Duggal N. Blue balls: understanding epididymal hypertension. *Healthline*. Accessed May 20, 2022. <https://www.healthline.com/health/mens-health/blue-balls>.
- Panchatsharam PK, Durland J, Zito PM. *Physiology, Erection*. StatPearls Publishing; 2022.
- Seeley TT, Abramson PR, Perry LB, et al. Thermographic measurement of sexual arousal: a methodological note. *Arch Sex Behav*. 1980;9:77-85.
- Patel AP. Anatomy and physiology of chronic scrotal pain. *Transl Androl Urol*. 2017;6(suppl 1):S51-S56.
- Caluya G. Sexual geopolitics: the "blue balls" theory of terrorism. *Continuum*. 2013;27(1):54-66.
- Dalzell T, Victor T. *Sex Slang*. Routledge; 2007.
- Sissons B. Blue balls (epididymal hypertension): myths and facts. *Medical News Today*. Updated October. 2021. Accessed May 20, 2022; <https://www.medicalnewstoday.com/articles/324870>.
- Kobola F. What is blue balls? *Cosmopolitan*. Updated July. 2018. Accessed May 25, 2022. <https://www.cosmopolitan.com/sex-love/q-and-a/a815/blue-balls/>.
- Nash EH, Sumner FC. Aspects of psychosomatic Orchidalgia. *J Genet Psychol*. 1954;85(2):231-238.
- Zane Z. You're totally overreacting about blue balls. *Men's Health*. Updated June. 2021. Accessed May 25, 2022. <https://www.menshealth.com/sex-women/a19534594/science-blue-balls/>.
- Torres K. A guy went viral for saying "blue balls" doesn't hurt and men use it as an excuse to get women to have sex, so we cleared things up with an expert. *BuzzFeed*. Updated February. 2021. Accessed May 22, 2022. <https://www.buzzfeed.com/kristatorres/blue-balls-tiktok>.
- Bouffard JA. The influence of emotion on rational decision making in sexual aggression. *J Crim Justice*. 2002;30(2):121-134.
- Bouffard JA, Miller HA. The role of sexual arousal and overperception of sexual intent within the decision to engage in sexual coercion. *J Interpers Violence*. 2014;29(11):1967-1986.
- LaFata A. Yes, female blue balls are actually a thing. *Elite Daily*. Updated December. 2015. Accessed May 20, 2022. <https://www.elledaily.com/dating/do-women-get-blue-balls-clit/1321496>.
- Miller K. Can women get blue balls, too. *Women's Health*. Updated January. 2016. Accessed May 20, 2022. <https://www.womenshealthmag.com/sex-and-love/a19955196/can-women-get-blue-balls/>.
- Hirschlag A. Women get something like "blue balls" too and this is what it feels like. *SheKnows*. Updated August. 2021. Accessed May 20, 2022. <https://www.womenshealthmag.com/sex-and-love/a19955196/can-women-get-blue-balls/>.
- Zukerman W. Blue balls: You're wrong about them. *Science Vs*. 2021. <https://www.womenshealthmag.com/sex-and-love/a19955196/can-women-get-blue-balls/>.
- Braun V, Clark V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101.
- Menning CL, Holtzman M. Processes and patterns in gay, lesbian, and bisexual sexual assault: a multimethodological assessment. *J Interpers Violence*. 2014;29(6):1071-1093.

21. Day LC, Muise A, Joel S, Impett EA. To do it or not to do it? How communally motivated people navigate sexual interdependence dilemmas. *Personal Soc Psychol Bull.* 2015;**41**(6):791-804.
22. Muise A, Impett EA, Desmarais S. Getting it on vs getting it over with: approach-avoidance sexual motivation, desire, and satisfaction in intimate bonds. *Pers Soc Psychol Bull.* 2013;**39**(10):1320-1332.
23. Fritz HL, Helgeson VS. Distinctions of unmitigated communion from communion: self-neglect and overinvolvement with others. *J Pers Soc Psychol.* 1998;**75**(1):121-140.
24. Brousseau MM, Bergeron S, Hebert M, McDuff P. Sexual coercion victimization and perpetration in heterosexual couples: a dyadic investigation. *Arch Sex Behav.* 2011;**40**(2):363-372.
25. de Visser RO, Rissel CE, Richters J, Smith AM. The impact of sexual coercion on psychological, physical, and sexual well-being in a representative sample of Australian women. *Arch Sex Behav.* 2007;**36**(5):676-686.
26. Martin M. What is blue balls (epididymal hypertension)? *Health Guide.* Updated November. 2021. Accessed May 20, 2022. <https://ro.co/health-guide/are-blue-balls-real/>.